

# UNIVERSITIES AS KNOWLEDGE GENERATORS IN THE FIGHT AGAINST POVERTY

La Granja de San Ildefonso

Jaime Cervera

<jaime.cervera@upm.es>

Director: Development Cooperation, Universidad Politécnica Madrid

Director: Observatory of the University Development Cooperation

(CEURI - CRUE: Conference of Rectors of Spanish Universities)



POLITÉCNICA



Jaime Cervera, 09/04/10



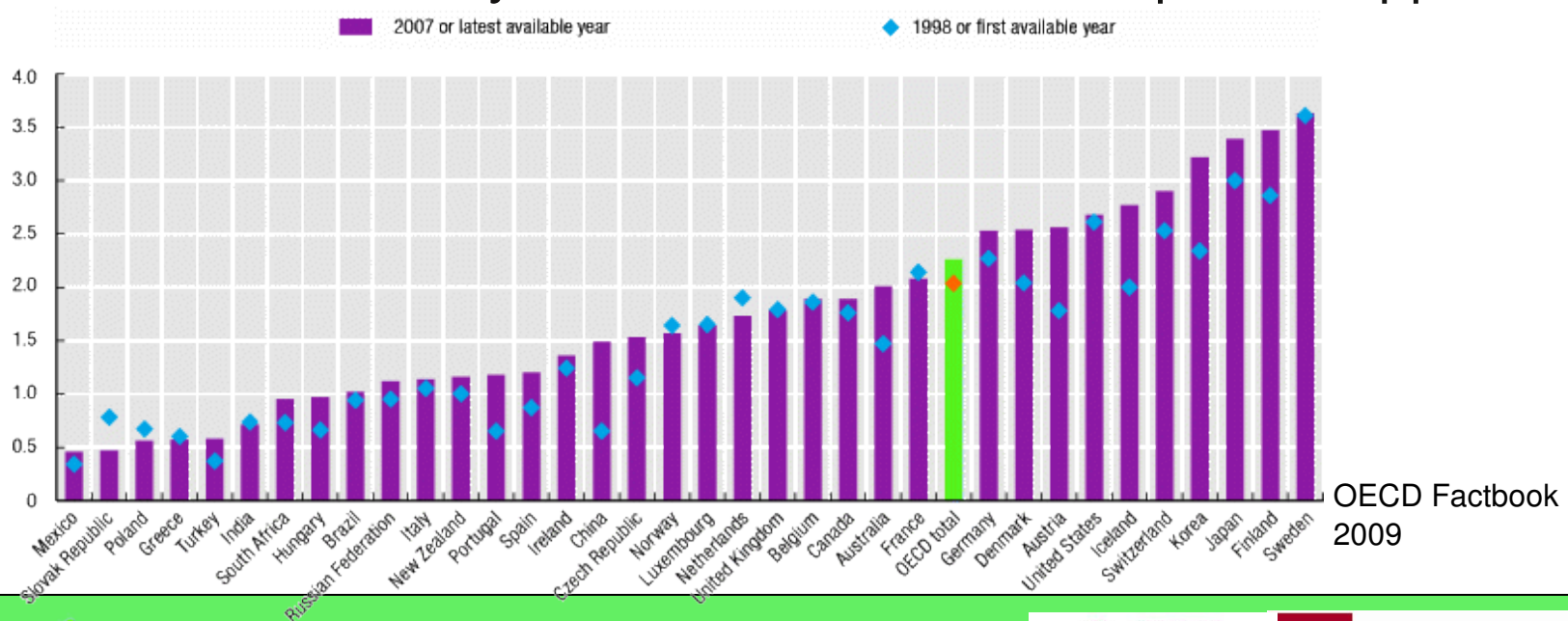
CRUE

# SUMMARY

- Consensus
  - Science and technology roles in "North's success"
  - Official Development Assistance failures
- *"The limitations of the special case"*
  - ... our limited knowledge about South's processes.
- Universities as research agents on poverty problems
  - spanish universities and development cooperation
- Need of strategy and incentives
- Conclusions

# SCIENCE IN DEVELOPMENT

- R&D in Science and technology (1%..4% of GDP)
- High success of R&D system in promoting *North's* development... (*knowledge economy*)
  - element of a wide *open* system (economy, politics ...)
  - driven by benefits, incentives, and public support



# ODA "FAILURE"

- 2,3 trillion \$ on last 50 years<sup>1</sup>
  - Growing gaps...
- Growth success cases unrelated to ODA (*asian tigers,...*)
  - harmonious labour-management relations
  - *relative* equity... and stability
  - Public investment on health and **education**...
- African stagnation in spite of Aid ...

# ODA FAILURE (lessons learnt)

- Economic growth is needed but is not enough
- Infrastructures are needed but aren't enough
- Institutional quality ... governance ... democracy are needed
- ... as health and education...
  - ... empowerment of poor *women* ...
- DEVELOPMENT, *highly correlated* with deployment of institutional and human capabilities and opportunities
- ... in the context of global economic conditions ...
- PRINCIPLES of 2005 PARIS DECLARATION



# WEALTH GAPS

- Technological / Digital gaps
- Distance to the *technological frontier* related with current and future capacities and productivities
  - human capital as key factor on the technology diffusion process... via adaptation and innovation
  - tertiary education as factor of economic divergence
  - ... implies increasing or decreasing gaps
- Tertiary education and research capability are real needs on *south's* societies
  - ... but attention to brain drain ...

# *The limitations of the special case*

## ■ (Dudley Seers 1963)

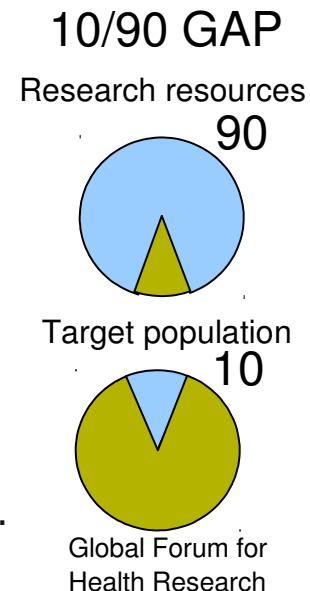
*"... it is inherently implausible that a "general theory", or even propositions of any generality, can be derived from the experience of a few countries with highly unusual, not to say peculiar, characteristics. Teaching which concentrates on this type of economy is somewhat distorted, and the distortion is dangerous if those teaching fail to stress continually that they are dealing with what is a highly special case"*

*!!!ABOUT ECONOMICS, BUT CAN BE APPLIED TO ALL KNOWLEDGE AREAS!!!*

## ■ *Particular solution and general problem*

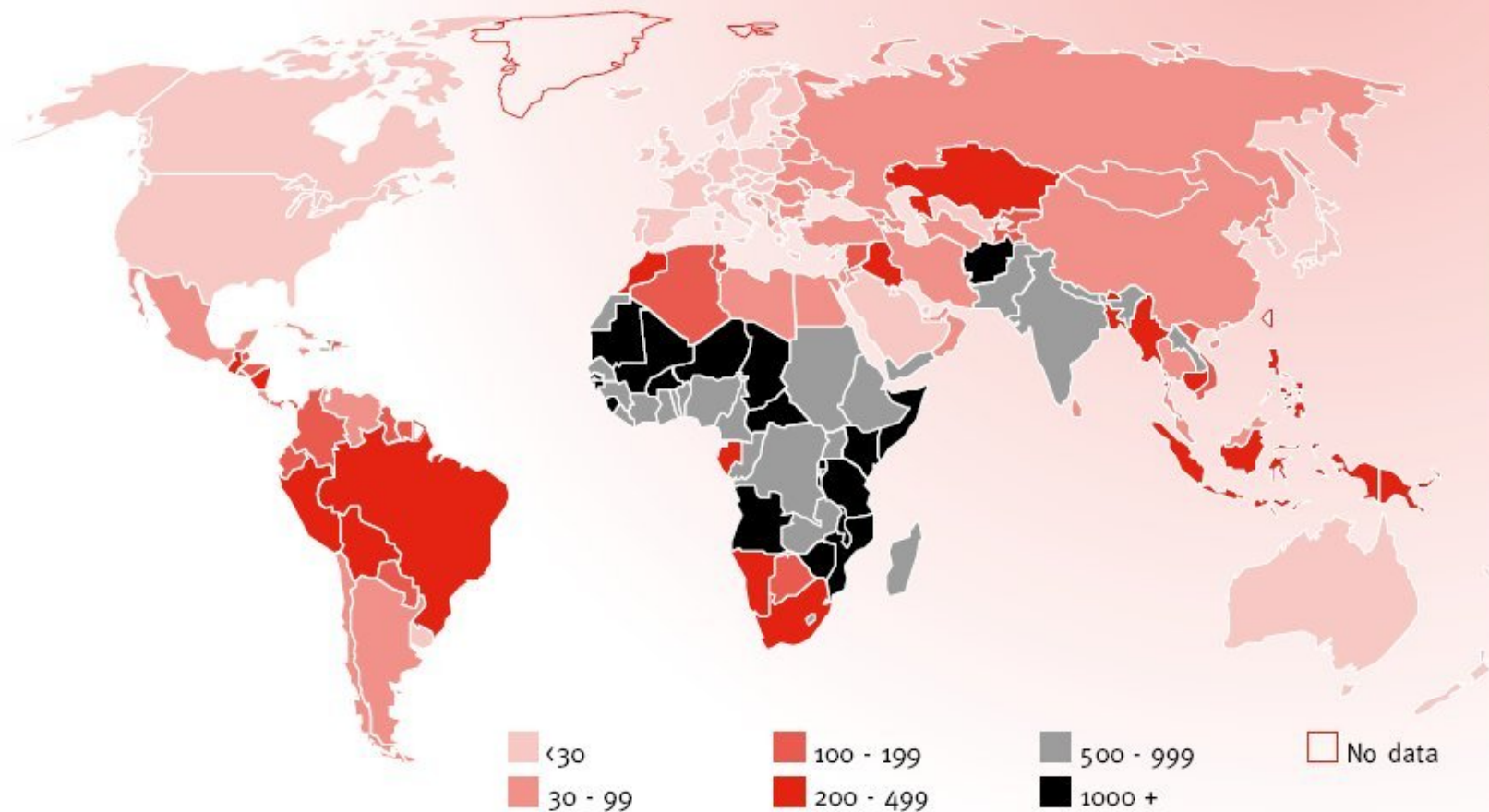
## ■ key examples

- Urban **concentrated** <> rural **dispersed** populations
- Poverty concentrates on **tropics**
  - Medicine, Agriculture, water management...
- Duality of solutions in the world: rich-**formal** / poor-**informal**
  - self-employment, informal construction, apprenticeship, ...



# Health example

Fig 10. Rate of maternal deaths (per 100 000 births), 2000



Presented by Andrés de Francisco in “Research to decrease inequities for mothers, neonates and children”.

Source: Population Reference Bureau, from WHO, UNICEF and UNFPA: *Maternal Mortality in 2000* (developed in 2003).



POLITÉCNICA



Global Forum for health research. Forum 11 report. 2007

Jaime Cervera, 09/04/10



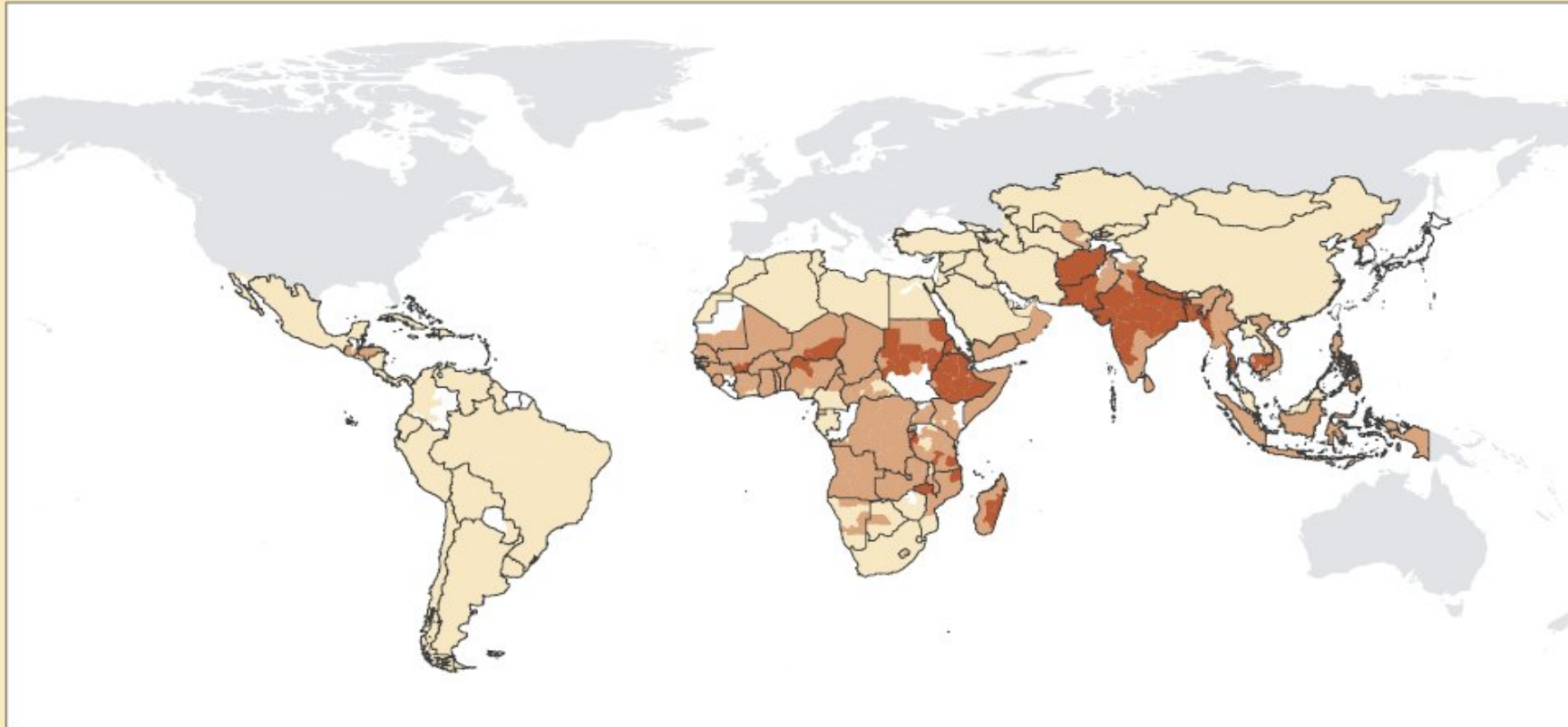
CRUE



# Hunger example

**Hunger hotspots: areas with more than 20% underweight pre-school children**

Source: CIESIN 2005.



□ less than 20 %    ■ 20–40 %    ■ above 40 %    □ no data



POLITÉCNICA



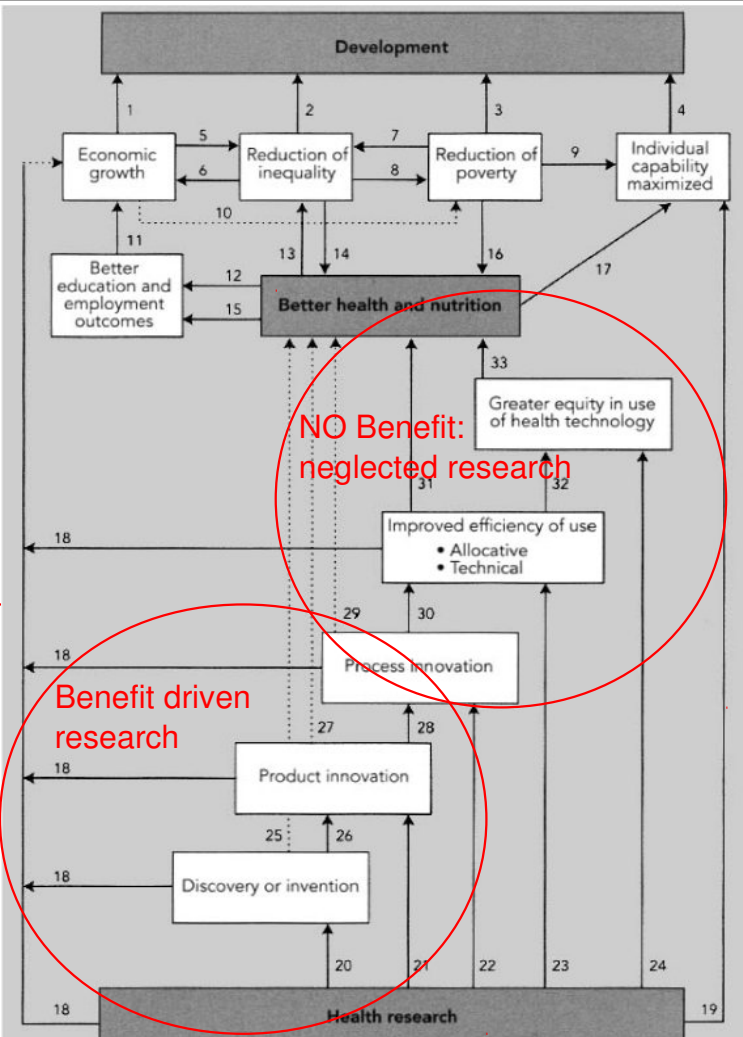
Halving hunger: it can be done”, Millenium Project, 2005

Jaime Cervera, 09/04/10



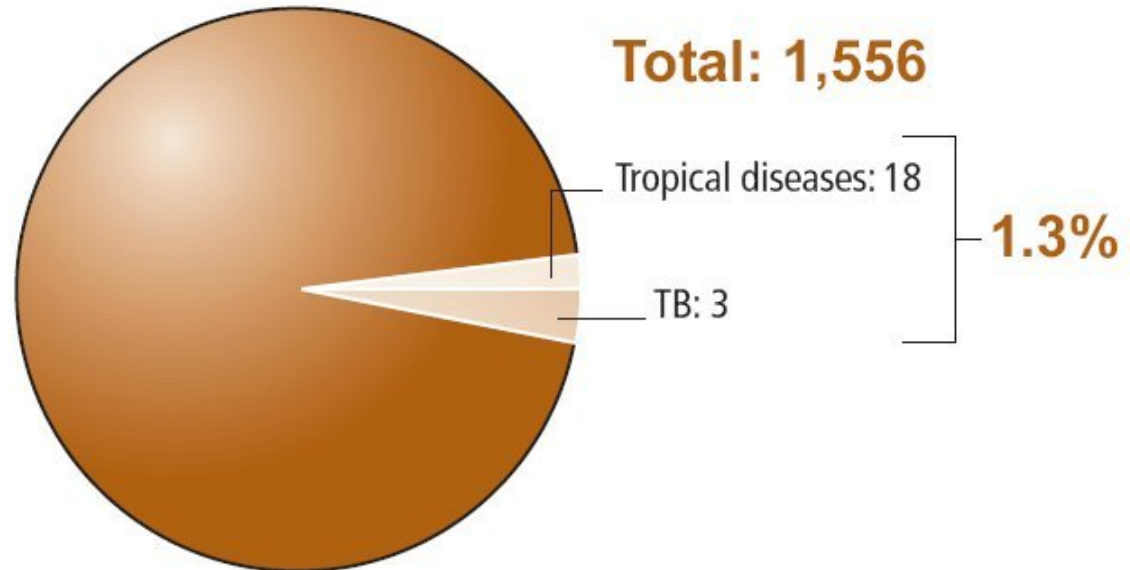
CRUE

# Health example



Health Research: An Essential Tool for Achieving Development Through Equity; David Harrison... IDRC 2001

## New drugs developed 1975-2004



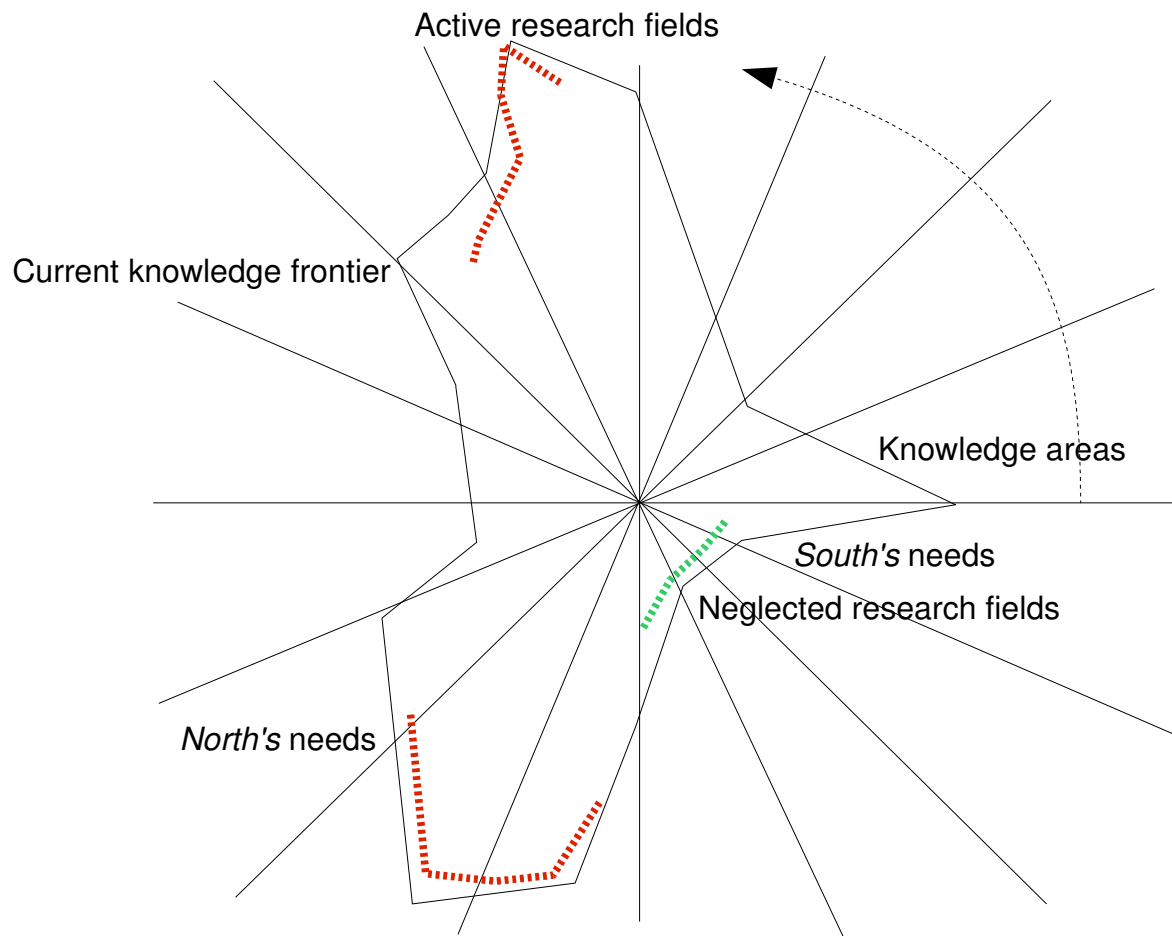
Tropical diseases and tuberculosis account for 12% of the global disease burden but only 1.3% of new drugs developed.

Presented by Robert Ridley and Yves Champey in "Neglected diseases: supporting the global framework on essential health R&D: a panel discussion"

Source: Chirac P, Torreele E. *The Lancet*. 12 May, 2006; 1560-1561

Global Forum for health research. Forum 10 report. 2006

# Research orientations



# Research focuses

- Tropical problems on health, agriculture, water ...
  - Crops, diseases, ... in a *climate change* context
- Informal (& disperse) economies and processes...
  - self and micro employment, local production, self-building... apprenticeship...
  - ...micro finance / micro assurance ...
- Improve COMPLEXITY and EMERGENT PROPERTIES on poor's processes and societies
  - Inclusive business, social entrepreneurship, ...
- cooperativeness versus competitiveness
- ... the *long (and insolvent) tail*, Base of Pyramid ...
  - how to make *solvent* the *insolvent* people (giving them decision-making power)

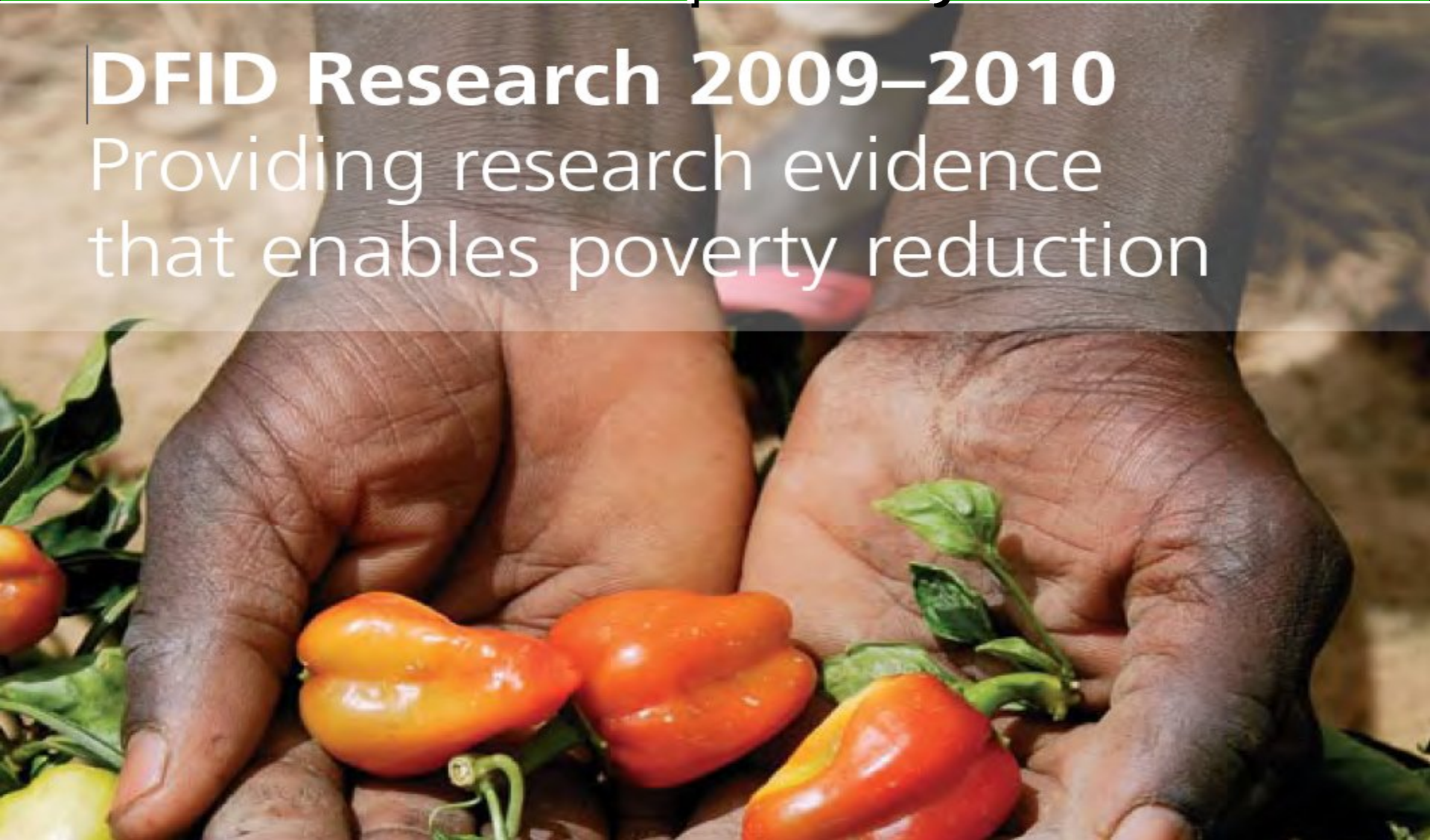




# Evidence in poverty reduction:

## DFID Research 2009–2010

Providing research evidence  
that enables poverty reduction



POLITÉCNICA



[www.research4development.info/news.asp?ArticleID=50614](http://www.research4development.info/news.asp?ArticleID=50614)

30 March 2010

Jaime Cervera, 09/04/10



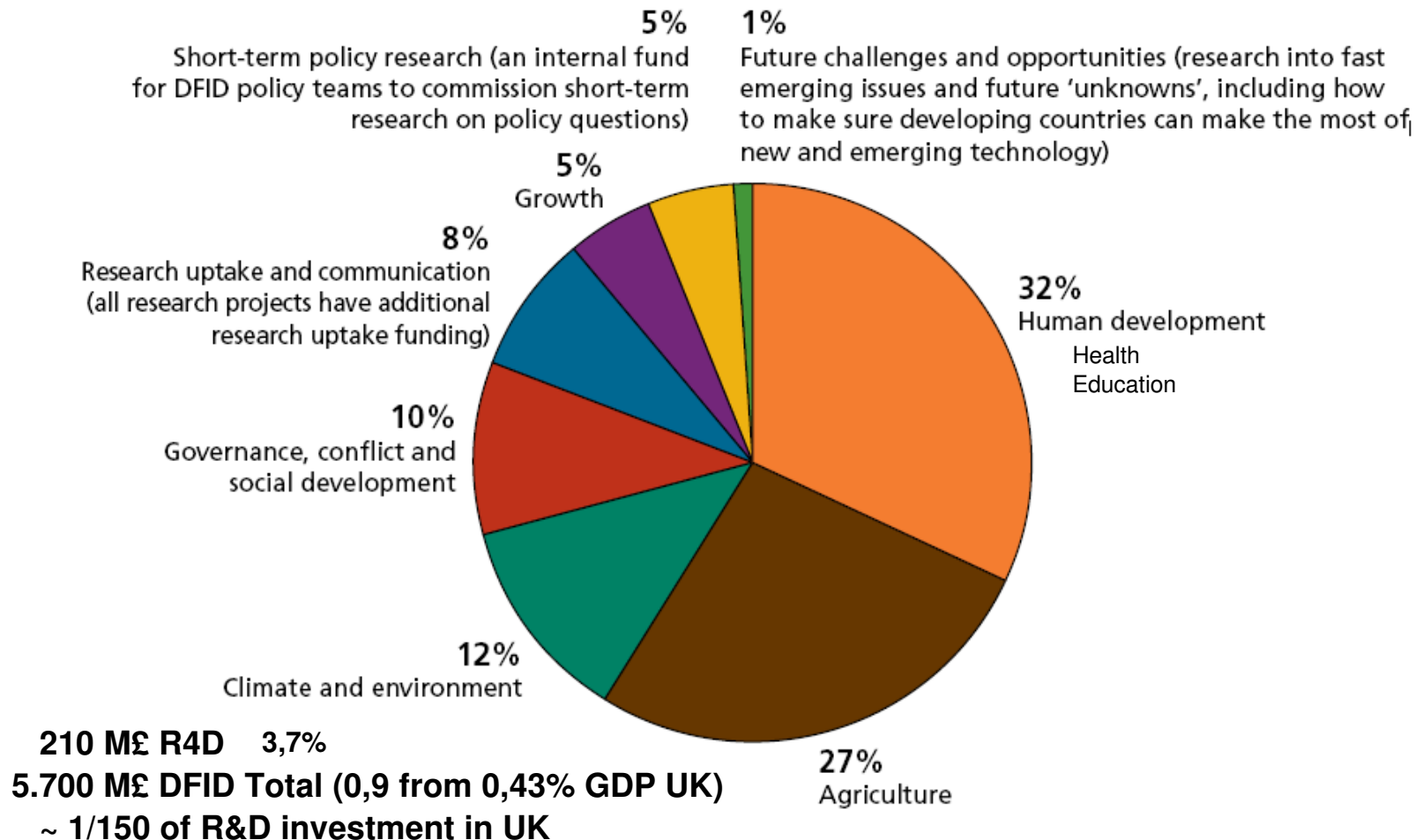
OBSERVATORIO  
CUD



CRUE

# DFID Research 2009–2010

## Allocation of the research programme budget by theme (2009–2011)





# R4D EXAMPLES

[www.manhica.org](http://www.manhica.org)



[www.ehas.org](http://www.ehas.org)



[www.ies.upm.es](http://www.ies.upm.es)



INSTITUTO DE ENERGIA SOLAR  
Universidad Politécnica de Madrid



[www.unavarra.es/grupos/agriculturadesarrollo/](http://www.unavarra.es/grupos/agriculturadesarrollo/)

Red  $\lambda$ ApD



Jaime Cervera, 09/04/10



CRUE

# Universities as knowledge gen.

EXAMPLE: UPM 2009 figures

(UPM's budget was 422 M€)

- Research & Development
  - 15 Centers of R&D
  - 224 recognized research groups
  - 84 University&Enterprise chairs
  - 120 M€/year in R&D funding
- Development Coop. and Research for Dev: R4D
  - 1 M€ total UPM's contribution to spanish ODA
    - about 33% could be accounted as R4D contribution
  - 24 recognized development groups
    - aimed to become research/action groups





# UPM's development groups

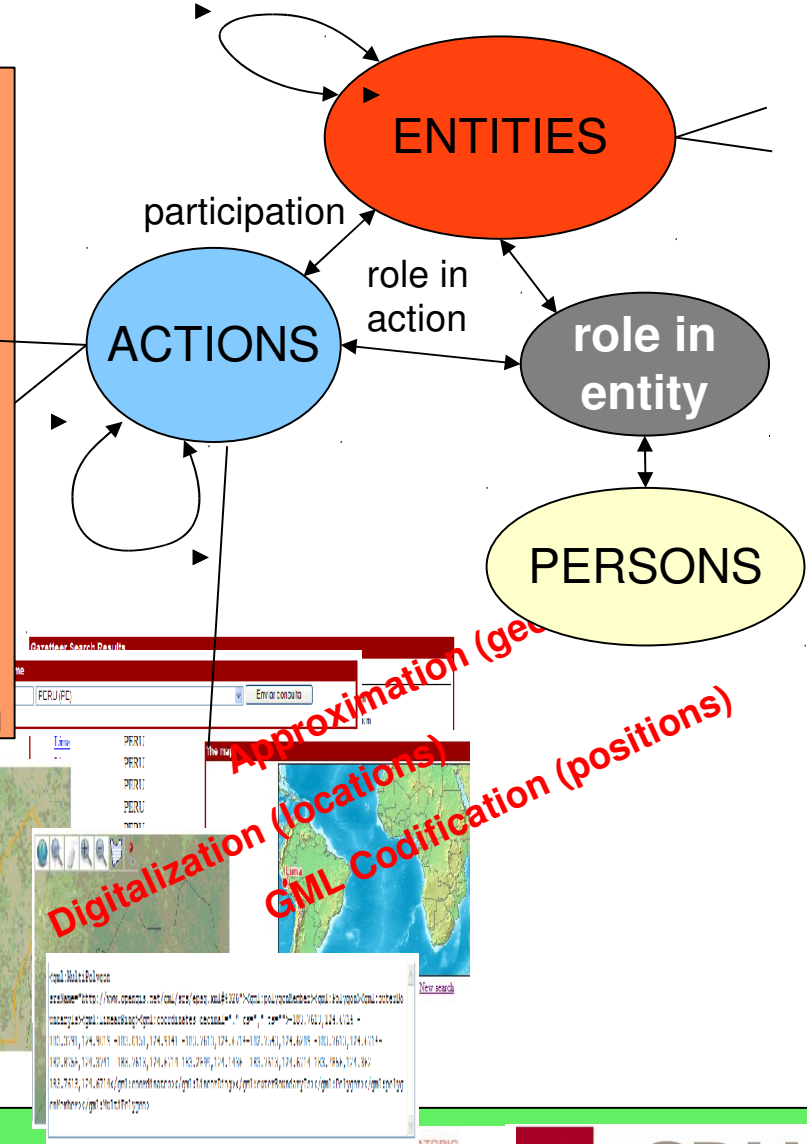
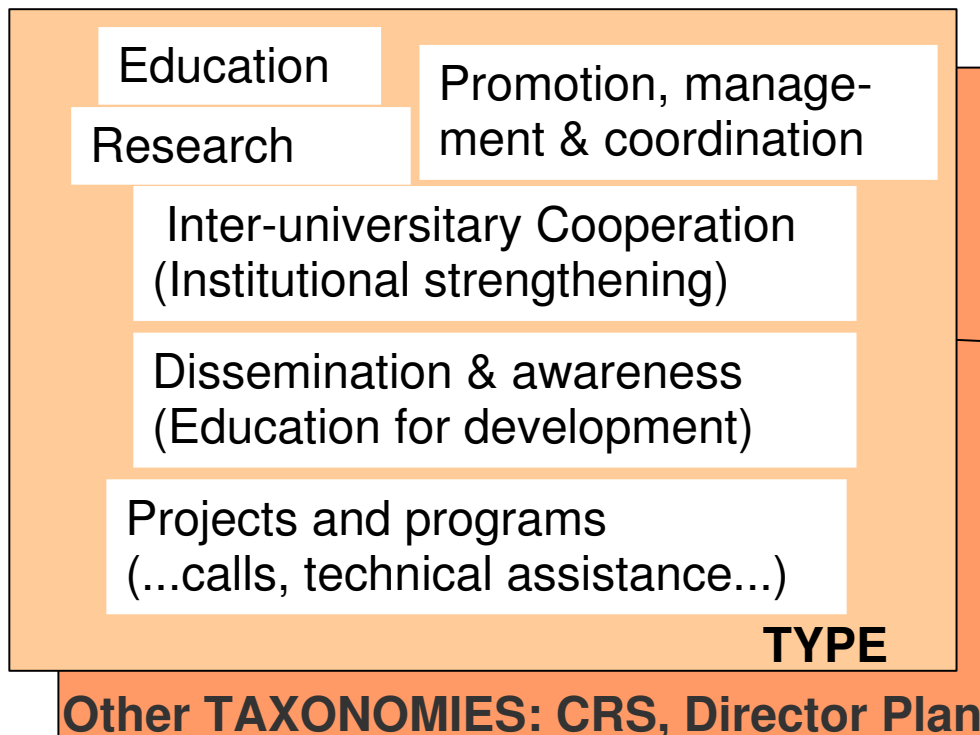
- "Model" components:
  - Work on their own scientific area ... aimed at poverty related south's problems
  - field project as essential component in the experimental application of research results
  - Strong counterparts -> need to strengthen counterparts
  - academic rigour and precision
- task for research groups!
  - difficulties: for young researchers, to shift group's traditional goals or research lines, ...
- development groups as initial wedges ...
- ... with an urgent need to scale up.

# Universities and Dev. Coop.

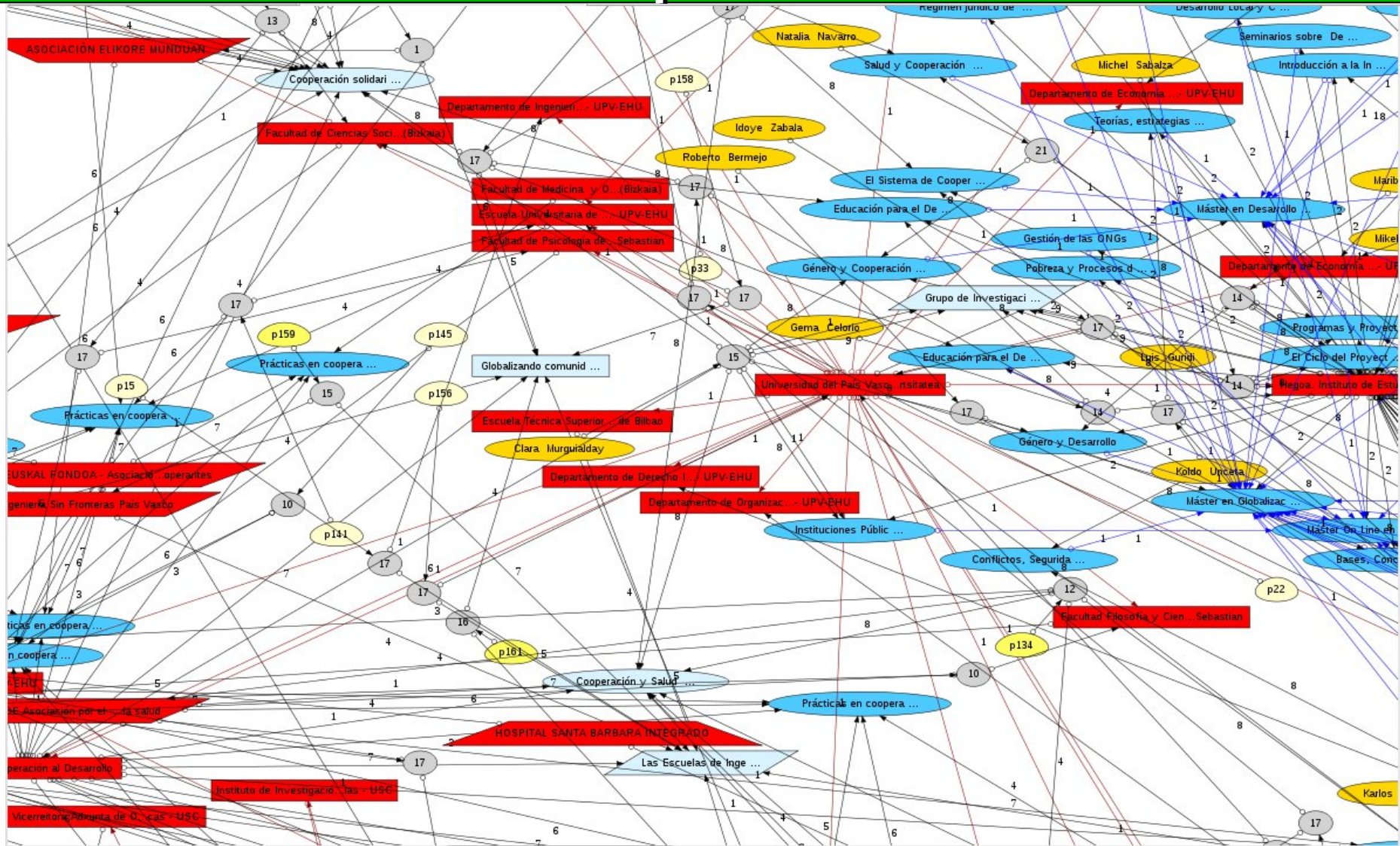
- CRUE -> CEURI (*CEURIC*) -> C CUD
  - (coordinating ~ 40 spanish universities)
- Strategy:
  - ESCUDE 2000
    - more than 16 vice-chancellors with DC in its name
  - Conduct Code on Development Cooperation 2006
    - 46 universities adhered
- Workgroups
  - Instruments on University Development Cooperation
  - Quality and Evaluation tools
  - Cooperation networks
- Common tools
  - CUD Observatory (OCUD): [www.ocud.org](http://www.ocud.org)



# (OCUD) Activities and agents



# Map extract





# RESEARCH ON POVERTY

- Put poverty and informal and underdeveloped societies under the science focus
- Drivers
  - financing, incentives, recognition, ...
    - ... objective indicators on R4D impacts, not relied only on JCR
- Strategic objectives
  - Establishment of research priorities (sect. & geog.)
  - Set-up of networks and alliances
  - Long-term and stable institutional support
- *universitary normality with positive discrimination*

# NEED OF INCENTIVES

- To undertake research priorities of partner countries
  - and engage excellent and recognized groups...
- For the creation and stabilization of reliable research institutions in partner countries
- For the stabilization and strengthening of poverty oriented research institutions in north's countries
  - health / basic and social sciences / technology ...
- To stabilize strong specialized knowledge networks between

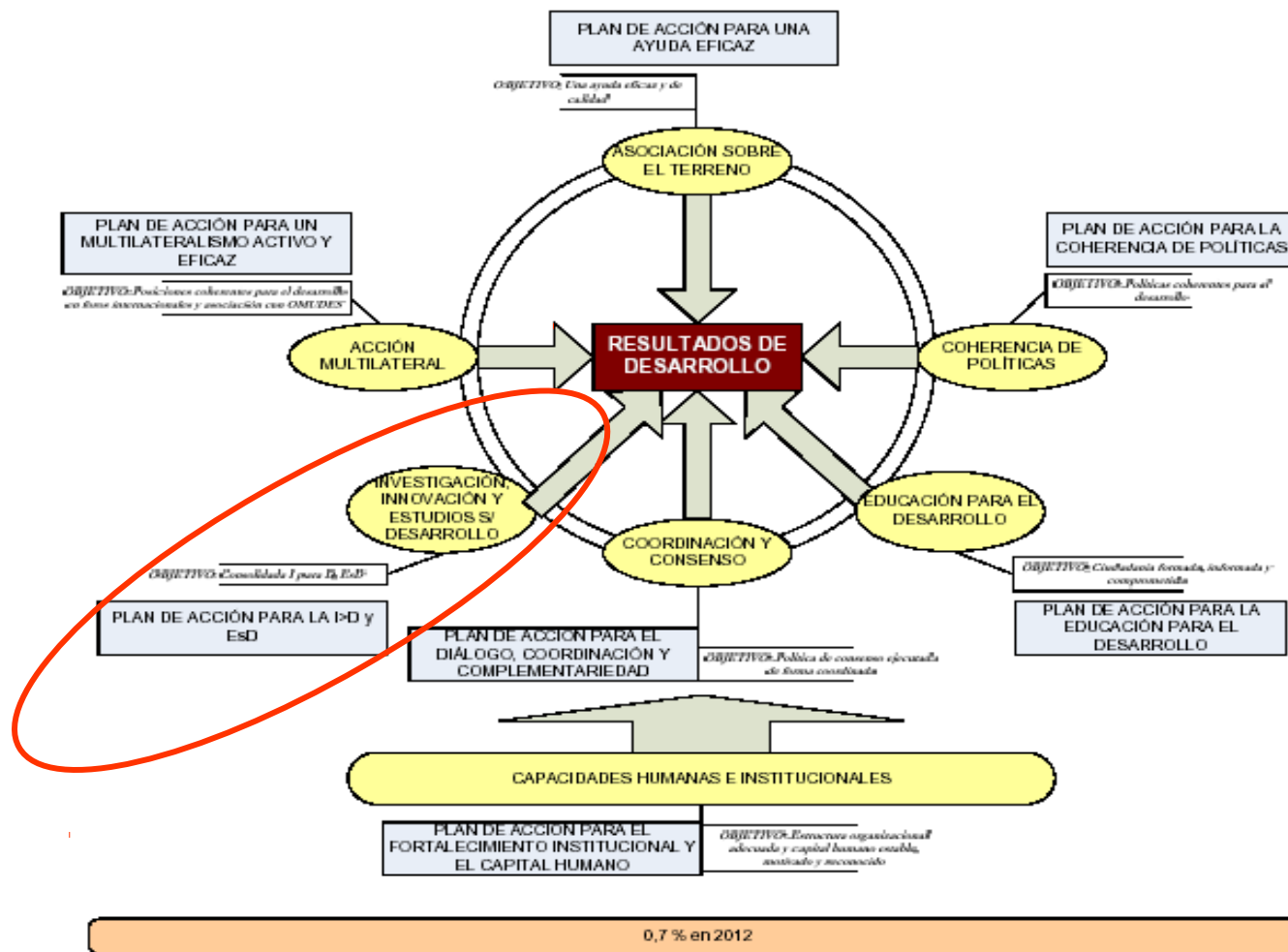
# Need of strategies

- To agree R4D (or R&D) objectives with partner countries.
  - in the framework of the 2005 Paris Declaration and the European consensus on Development Cooperation...
  - aiming to long-term collaboration and making attention to excellence differences between research partners.
- To conceive and build pilot large-scale experiences and institutions
- To renew or invent financial/institutional instruments
- To develop objective impact measure tools and indicators
  - in agreement with Paris Declaration Principles
  - in accordance with current praised indicators in R&D



# SP. DC Director Plan 09-12

Fig. 1. ÁMBITOS ESTRATÉGICOS, OBJETIVOS Y PLANES DE ACCIÓN CORRESPONDIENTES

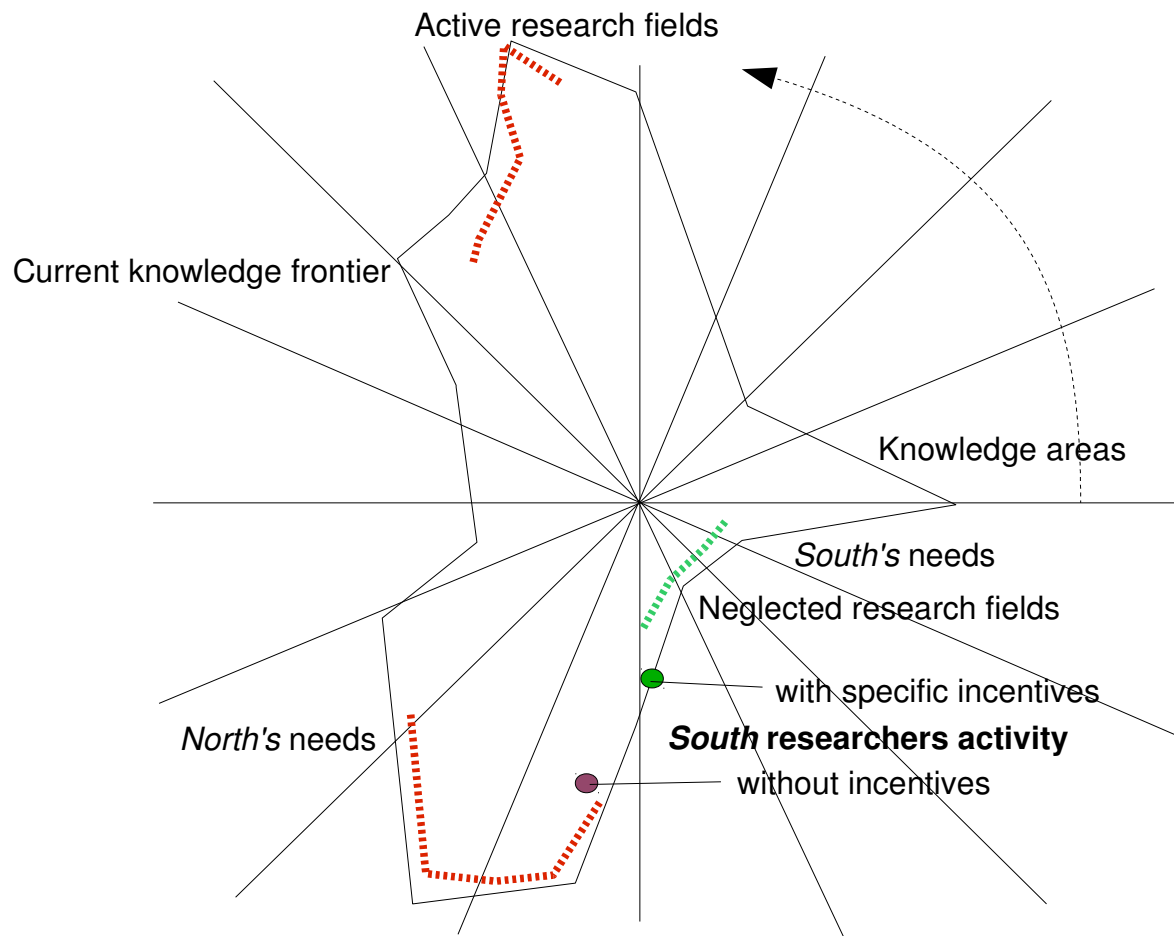




# SP. DC Director Plan 09-12

Revised schedule, PACI 2010

AE	ÁMBITO ESTRATÉGICO	2009				2010				2011				2012			
		T1	T2	T3	T4	T1	T2	T3	T4	T1	T2	T3	T4	T1	T2	T3	T4
1	EFICACIA DE LA AYUDA				Impulso PLAN DE ACCIÓN				Implementación								
2	MULTILATERALISMO ACTIVO Y EFICAZ				Impulso PLAN DE ACCIÓN				Implementación								
3	COHERENCIA DE POLÍTICAS				Bases			Impulso PLAN DE ACCIÓN					Implementación				
4	EDUCACIÓN PARA EL DESARROLLO								Impulso PLAN DE ACCIÓN				Implementación				
5	INVESTIGACIÓN, INNOVACIÓN Y ESTUDIOS SOBRE EL DESARROLLO								Impulso PLAN DE ACCIÓN				Implementación				
6	CAPACIDADES INSTITUCIONALES Y HUMANAS								Implementación			Impulso PLAN DE ACCIÓN				Implementación	
7	CONSENSO, COORDINACIÓN Y COMPLEMENTARIEDAD								Implementación								



# CONCLUSION

- Specific researches on poverty related problems are needed.
- R&D support system has a great experience on promoting research lines and institutions.
  - Many of its methods can be successfully employed
- R4D can open new trends and opportunities.
  - Both in north and south's countries
- Important resources and capabilities in universities and research centers... but not yet fully used
- We need urgently to boost incentives and launch strategies to efficiently deploy those skills.

